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Abstract

FUEL BURN-UP IN THE WWR-C-BUCHAREST REACTOR

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Fuel burn-up is studied on groups of 16 rods, and is defined by the function

$$FA_i = - \frac{f}{k} \frac{\Sigma ai}{\Sigma' ac}$$

where Σ ai is the absorption cross-section in the fission products and Σ' ac is the total absorption cross-section in the burned-up uranium. Variation of the factor η with burn-up is neglected and justification for this is given.

The quantity of uranium-235 burned up, the absorption cross-section of the fission products and variation of the factor η f with burn-up are deduced from these functions as measured on the WWR-C reactor using the danger coefficient method.

These values are compared with those deduced from the poisoning characteristic.